BC

a--3

Normal long-chain acids terminating in cyclo-
hexyl or cyclopentyl. II. cycloPentylvaleric
acid and its derivatives. M. M. KATZNELSON and
M. S. KOSPANOVA (Compt. rend. Acad. Sci. U.R.S.S.,
1937, 17, 367—370).—Mg cyclopentyl bromide and
furfuraldehyde yield cyclopentylfurylcarbinol, b.p.
114—116°/5 mm., converted by EtOH-HCl into the
Et ester, b.p. 140—147°/9 mm., of δ-cyclopentyl-
lævulic acid, m.p. 65°. Reduction (Clemmensen) of
this ester gives the -valeric acid, m.p. 11°, b.p. 150—
153°/9 mm. (Me ester, b.p. 118—119°/12 mm.;
chloride, b.p. 134°/12 mm.; amide, m.p. 138°; anilide,
m.p. 81—81·5°; Cd salt).   A. LI.

Ca

10

PROCESSES AND PROPERTIES INDEX

1-Propyl-2-methylvaleric acid and 1,2-dimethylcaproic acid. M. S. Kondakova and M. M. Katsnel'son. *Compt. rend. acad. sci. U. R. S. S. 18*, 271–4(1938) (in German); cf. C. A. 31, 3448¹.—By refluxing 208 g. of PrCH(CN)₂, Et)₂ in 250 g. abs. EtOH and 36.6 g. Na for 8 hrs. with 100 g. of sec-BuBr, 96 g. of sec-BuCPr(CO₂Et)₂ (I) b. 245–55°, was obtained after distg. off the alc., adding H₂O and extg. with Et₂O. The K salt, m. 134–6°, of sec-BuCPr(CO₂H)₂ (II), crystd. from C₆H₆, was prepd. from I and KOH in abs. alc. The Ag salt was made and analyzed. By heating II, sec-BuCHPrCO₂H (III), b. 233–4°, is obtained. The Me ester of III, b. 183–4°, was prepd. from the Ag salt and MeI in abs. Et₂O. III and PCl₅ yield the acid chloride, b. 97–100°, from which the amide, m. 125°, and anilide, m. 110–11°, were prepd. Likewise 85 g. of PrMeCHCMe(CO₂Et)₂ (IV), b. 128–32°, was prepd. from 125 g. of PrMeCH(CO₂Et)₂ in 128 g. of abs. alc., 12.5 g. Na and 85 g. of MeI. The acid of IV m. 139–40°, from which PrMeCHCHMeCO₂H (V), b. 223–4°, was prepd. The Me ester of V b. 175–6°; its acid chloride b. 80°; the amide m. 121°.   Amos G. Horney

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PROCESSES AND PROPERTIES INDEX

The synthesis of carbon-condensed systems from α-
and α'-aminonicotines. III. The action of bromopyruvic
ester on α- and α'-aminonicotines. Ya. L. Gol'dfarb and
M. S. Kondakova. J. Gen. Chem. (U.S.S.R.) 10, 1055-
64(1940); cf. C. A. 32, 176⁰; 35, 2149¹.—α-Aminonicotine
(I) and BrCH:C(OH)CO₂Et (II) react in Et₂O or EtOH
to form a compd. which loses H₂O on standing or gentle
warming to cyclize to 7-(1-methyl-2-pyrrolidyl)-2(or 3)-
carbethoxypyrimidazole (III), b. 233-4°, b₁ 248-50°, m.
96-7° (II Br salt, decomps. 230-2°; picrate, m. 177-8°).
When III is heated with HCl, it saponifies to 7-(1-methyl-
2-pyrrolidyl)-2(or 3)-carboxypyrimidazole (IV), (di-HCl
salt, decomps. 232-7°; mono-HCl salt, m. 198-201°;
picrate, m. 113-10°). Free IV is very hygroscopic and
decomps. over a wide temp. range when heated. When
III is treated with strong NH₃, it gives the amide of IV,
m. 215° (HCl salt, m. 244-54°). When IV is heated at
225-35°, it loses CO₂ to form 7-(1-methyl-2-pyrrolidyl)-
pyrimidazole (V), b₁ 150°, m. 44-7° (HCl salt, decomps.,
257°; picrate, m. 240°). Oxidation of V by CrO₃ gives I
which proves that the new ring is formed on the 2 N atoms.
Nitration of IV gives a nitro deriv. (VI), m. 96-7°. Nitra-
tion of III gives a nitro deriv. (VII), m. 111-12°, which loses
CO₂ when heated with 60% H₂SO₄ and forms VI. Oxida-
tion of VII by CrO₃ or heating it with KOH in EtOH gives
I. These reactions show that the NO₂ group is on the C
atom next to the CO₂Et group in the imidazole ring, and this
also dets. the structure of VI. α'-Aminonicotine and II
give 5-(1-methyl-2-pyrrolidyl)-2(or 3)-carbethoxypyrimida-
zole, b₁ 215-7°, m. 164° (picrate, decomps. 225°).
When this is boiled with strong HCl it gives the HCl salt

of the corresponding acid as an amorphous, hygroscopic
mass. This loses CO₂ when heated and gives 5-(1-methyl-
2-pyrrolidyl)pyrimidazole, b₁ 160° (picrate m. 204-5°).
IV. Condensation of α-aminonicotine with acetoacetic
ester. M. S. Kondakova and Ya. L. Gol'dfarb. Ibid.
1065-8.—When α-aminonicotine (I) and a slight excess of
AcCH₂CO₂Et are heated at 170-85° and the residual mass
is vacuum-distd., a compd. (II) is obtained, m. 112°
(picrate, m. 209°; HCl salt, decomps. 244-7°). Hydrolysis
of II by either HCl or KOH gives I. Thus a pyrimidine
ring has formed on the 2 N atoms of I. However, it is not
certain whether II is 1,2-II'-(1-methyl-2-pyrrolidyl)-
divinylene-6-methyl-4-pyrimidone, or the corresponding
4-methyl-6-pyrimidone isomer. Nitration of II gives a
nitro compd., m. 120-1°, but when this is heated with KOH,
no NH₂ is formed and only I is regenerated. II and MeI
form a methiodide, decomp. 238-40°. When this is
hydrolyzed with 20% HCl, it forms a different methiodide,
m. 228°. This shows that the MeI united with the N of
the pyrrolidine ring.   H. M. Leicester

ASM SLA   METALLURGICAL LITERATURE CLASSIFICATION

Lab. Heterocyclic Compounds,
Inst. Org. Chem., AS USSR

KONDAKOVA, M. S., GOL'DFARB, Ya. L.

"Syntheses of Carbazole Condensed Systems From Aminonicotines -- IV. Condensation of Aminonicotines With Acetoacetic Ester." Zhur. Obshch. Khim., 10, No. 12, 1940. Lab of Heterocyclic Compounds, Inst. of Organic Chemistry Academy of Sciences USSR. Received 2 January 1940.

Report U-1627, 11 January 1952.

PROCESSES AND PROPERTIES INDEX

Action of alkyl halides on amino derivatives of nicotine.
Ya. L. Gol'dfarb and M. S. Kondakova. (Inst. Org. Chem.
Acad. Sci. U.S.S.R.)— Compt. rend. acad. sci. U.R.S.S.
45, 484-7(1945).—In the formulas below

R = H₂N— (pyridine ring),   R' = —CH(CH₃)—N(CH₃)(CH₂)

The HCl salt of α'-aminonicotine, RR' (I), and AcCH₂Cl
(II) give a much better yield of 5-(N-methyl-α-pyrroli-
dyl)-2-methylpyrimidazole (Ia) (cf. Gol'dfarb and Ka-
trenko, C.A. 35, 2149¹) than I and II, supporting the
assumption that cyclic products are formed in the reaction
of α-halocarbonyl compds. with aminonicotines, particu-
larly I. 1 in cooled, concd. MeOH soln. is treated with 1
mole MeI, the mixt. heated for several mins., and Et₂O is
added to give less than 20% of a base and about 65% of an
oil (H₂O-sol.) which eventually crystallizes, m. 149-150°
(when heated slowly), after 2 crystns. from alc. On the
basis of its stability to alkalies and analysis, it is assigned
the structure [RCH.CH₂.CH₂.CH₂.NMe₃]I.0.5H₂O (III);

perrate, m. 217° (decompn.); m. 114°. III and Ag₂O,
followed by distn. in vacuo, give RCH:CHCH.CH₂NMe₂
(IV), from C₆H₆-gasoline, m. 96-7°. IV, in acid medium,

decolorizes KMnO₄ and forms with MeI an iodide, m.
210°, which is stable toward alkalies and appears to
be [RCH:CHCH₂CH₂NMe₃]I. I,III and MeI yield a
base (Va or Vb), b. 105°, which forms, on standing,
crystals that deteriorate rapidly in air. With CO₂ it gives
a cryst. carbonate. Thus I and MeI give Va or Vb only

when the pyrrolidine N is satd. beforehand. α-Amino-
nicotine (VI) and MeI give (1) unchanged VI, (2) 25-28%
of 2 methiodides, one m. 220-8° (cf. Kondakova and
Gol'dfarb, C.A. 35, 4121¹) (degraded, according to Hof-
mann, to a base m. 84°), another m. 205°, and (3) about
50% of a base, b. 183-4° (after purification by crystg. its
salt with HClO₄), whose structure is probably VIIa (colored
vapors) but could be VIIb (no NH₂ is formed on boiling
with alkalies). VI and EtI give 60% of the Et deriv.
(VIII), b. 182-4°, sepd. from VI by HNO₂ treatment;

.(Ia)   (Va)   (Vb)

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(VIIa)   (VIIb)

picrate, m. 193-4°. VIII gives no nitrosamine, indicating a structure corresponding to VIIa. No alkohalide is formed. Likewise VI and PrI give only this type of substitution product. I with EtI or PrI also shows this phenomenon, but the decrease in the ability of the pyrrolidine N to form alkohalides is here not so pronounced.

R. L. May

PROCESSES AND PROPERTIES INDEX

Benzylation of amino derivatives of nicotine. Va I. Gol'dfarb and M. S. Kondakova. (*Compt. rend. acad. sci. U.R.S.S.* 49, 42f 3(1945); cf. C.A. 40, 4752). PhCH₂I reacts with α'-aminonicotine (I) in ethanol or acetone to form only the *benzyl iodide*, m. 190°. To eliminate the influence of the pyrrolidine N on the process, the HCl salt (II) was used instead of the free base. II and PhCH₂I gave a *monobenzyl deriv.* (III), m. 126°; *picrate* m. 204.5°. I heated with BaH and HCO₂H give III also. III and HNO₂ form a *nitroso compd.*, m. 90°. The latter heated with dil. HCl gives III again. So it is believed that III must have a structure of type Vb rather than Va (see above reference for the structural formulas.) A compd. of structure Va is pptd. by CO₂ from ether as a cryst. ppt., while the isomer of structure Vb remains in soln. The carbonate forms a base, a monobenzyl deriv., which gives a colored vapor and absorbs CO₂ from the air. It is supposed that the alkylated pyridonimine structure as given in Va is prone to combine with CO₂ to form salts, whereas the isomer of type Vb does not. Thus N-methylpyridon-imine and N-benzylpyridonimine are pptd. from ether by CO₂, but benzylaminopyridine is not. PhCH₂I and α-aminonicotine (IV) form with difficulty the *benzyl iodide* of IV, m. 141°. PhCH₂Cl and IV react smoothly in EtOH to form a base, b. 216-18° (picrate, m. 204°) of the pyri-donimine type. No isomer of the aminopyridine type was found. IV reacts with BaH and HCO₂H to give a *mono-benzyl deriv.*, b. 177-8° (*picrate*, m. 186°). This does not react with HNO₂ to form the nitrosamine as does III, so cannot be ascribed a similar structure.   J. W. G.

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Synthesis of carbazo-condensed systems from α- and α'-aminonicotines. VI. Product of the reaction of α-aminonicotine with α-bromoacetoacetic ester. M. S. Kondakova and Ya. L. Gol'dfarb. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1946, 821-8(in Russian); cf. C.A. 37, 2580. α-Aminonicotine (20 g.) and 25 g. AcCHBrCO₂Et in 85 ml. abs. EtOH were allowed to stand overnight, then heated 2 hrs. on a steam bath, after which the EtOH was removed and the residue, taken up in H₂O, was freed of excess starting material by extn. with Et₂O. The aq. soln. was made alk. and extd. with Et₂O; distn. of the dried ext. gave 19.7 g. 7-(1-methyl-2-pyrrolidyl)-2-methyl-3-carbethoxypyrimidazole (I), m. 83-4° (from aq. Me₂CO), b. 185-95°; *HCl salt*, small crystals (from EtOH-Et₂O); *picrate* m. 108° (from Me₂CO-EtOH). The substance is an effective stimulant of respiration (in cats, dogs, rabbits). Heating the ester (4.5 g.) with 15 ml. concd. HCl 16 hrs. at 135-45° in a sealed tube, evapn. to dryness, treatment with KOH, and extn. with Et₂O gave 2.7 g. pure 7-(1-methyl-2-pyrrolidyl)-2-methylpyrimidazole, m. 85-7°, b. 182-3° (II); *picrate*, m. 219-20° (from aq. Me₂CO). II (0.8 g.), 2 ml. concd. H₂SO₄, and 10 ml. H₂O, treated with 0.8 g. Cr oxide in 11 ml. H₂O and boiled 8 hrs., gave 0.5 g. α-aminonicotine, m. 125°. Nitration of I by fuming HNO₃-H₂SO₄ in the cold failed to take place. II, on the other hand, readily gave a *nitro* deriv., m. 121° (from hexane), which on treatment with hot alc. KOH readily gave α-aminonicotine; the NO₂ group probably is in the 3-position.   G. M. Kosolapoff

3-Chloro-6-methoxy-8-nitroquinoline.   Harry L. Yale (Squibb Inst. for Med. Research, New Brunswick, N.J.). *J. Am. Chem. Soc.* 70, 1082(1948).—3,4-O₂N(H₂N)-C₁₀H₅OMe (50.4 g.), 82.5 g. H₃AsO₄, and 300 ml. concd. HCl at 100°, treated (1 hr.) with 30 g. CH₂:CClCHO and heated an addnl. hr. at 100°, give 16 g. 3-chloro-6-methoxy-8-nitroquinoline, m. 150.5-6)°.   C. J. West

/O

Amino derivatives of 1-(2-pyridyl)-1,3-butadiene. V. L. Gol'dfarb and M. S. Kondakova. *Compt. rend. acad. sci. U.R.S.S.* 55, 817-18(1947); cf. C.A. 40, 4732. By a Hofmann degradation of the methiodides 2-(I) and 6-aminonicotine (II), m. 96°, were obtained. II gave a

CH:CHCH₂CH₂NMe₂

—NH₂ (I)

—CH:CHCH₂CH₂NMe₂

H₂N (II)

methiodide (III), m. 210°, which when refluxed with alkali decompd. to give Me₃N and a compd. which analysis showed to be (IV), m. 125-6°. IV was also obtained by

CH:CHCH:CH₂

H₂N—N (IV)

a soln. of III with Ag₂O on a steam bath. IV polymerizes on standing. Similarly the 2,3-isomer (V) of IV, m. 74°, was obtained, along with a compd., m. 130°, believed to be 1,2-dihydro-2-methyl-1,8-naphthyridine. W. S. P.

Preparation of cyclic thioamides. J. Prochazka (Research Institute of the Bata Foundation at Zlin). *Collection Czechoslov. Chem. Commun.* 12, 305-310(1947).— CS₂ with 1.5-70% P₂S₅ is used at 70-120 atm. to convert cyclic lactams to cyclic thioamides by a process of "thionation." ε-Caprolactam (150 g.) in 750 cc. CS₂ (washed with 2% Na₂CO₃ and dried over CaCl₂) was heated at 340-50° at 80 atm. 14 hrs. On cooling the pressure dropped to 15 atm. and COS and H₂S were removed from the autoclave. ε-Thiocaprolactam (II), obtained in 62-g. yield, b. 188-90°, m. 105-5.5° (from C₆H₆-PhMe). The colorless ether-insol. crystals gradually turn yellow; 76 g. of a polymer of II was also obtained. When 1.5 g. P₂S₅ was added to the CS₂ above, II was obtained in 90-g. yield along with 35 g. of a polymer of II. CS₂ and I do not react in 2 hrs. at 230° and 35 atm., nor in 13 hrs. under reflux. When 1 g. II was warmed with 0.05 g. ε-aminocaproic acid and 0.02 cc. N HCl at 230-250° 27 hrs., a brown thermoplastic polymer and H₂S were formed. 2-Thiopiperidone, obtained in 0.5-g. yield from 2.5 g. 2-piperidone (b. 140-6.5°), 6 g. CS₂, and 0.1 g. P₂S₅ at 235-40° 6.5 hrs., b. 141-65°. N(S?)-Methyl-ε-thiocaprolactam (III), obtained in 24-g. yield from 45 g. methyl-ε-caprolactam (C.A. 15, 3456), 100 g. CS₂, and 1.5 g. P₂S₅ at 245° 6 hrs. at 105 atm., b. 160-70°, m. 49-51° (from anhyd. EtOH and washed with Et₂O); the odor of V produces bad headaches. Attempts to polymerize V as with IV failed; only decompn. occurred. No polymer was noticed in the prepn. of V; instead an 11-g. fraction b. 80-105° was obtained. John W. Green

Action of alkyl halides on α- and α'-aminonicotines.
Ya. L. Gol'dfarb and M. S. Kondakova (Inst. Org. Chem.,
Moscow). *Invest. Akad. Nauk S.S.S.R., Otdel Khim.
Nauk* 1949, 636–47.—MeI (12.5 g.) and 15 g. α'-amino-
nicotine (I) in 20 ml. MeOH after standing 1 hr. and re-
fluxing 15 min. gave the *methiodide*, m. 149–50° (from
EtOH), contg. 0.5 H₂O, with the MeI at the pyrrole N
atom, as it is unchanged by concd. alkali; its HCl salt, m.
179–80°. Reaction of MeI with I.2HI in MeOH, fol-
lowed by treatment of the cryst. product with hot 50%
NaOH, gave *1-methyl-5-(1-methyl-2-pyrrolidyl)-2(1H)-py-
ridonimine*, b₁₁ 171°; *picrate*, m. 170° (from Me₂CO-
EtOH); the sepn. of this material from I may be done by
carbonation, as I does not form a carbonate. I.HCl with
MeI gave a similar result. α-Aminonicotine (II) (21.4
g.) and 18.4 g. MeI in 60 ml. MeOH refluxed 3 hrs. gave
8.9 g. *methiodide*, m. 224–7° (from MeOH), contg. MeI
at the pyrrole N; it regenerates the starting material on
heating with CaO. Addn. of Et₂O to the mother liquor
from the above methiodide, followed by alkali, gave a
mixt. of methylation products, b₁ 143–53°, from which
was isolated 12 g. of a *base*, C₁₁H₁₇N₃, b₇ 151–2°, identified
as *1-methyl-3-(1-methyl-2-pyrrolidyl)-2(1H)-pyridonimine*,
which yields a cryst. *carbonate* and *diperchlorate; dipicrate,*
m. 221°. An Et₂O-insol. portion of the reaction mixt.
after alkali treatment consists of a very complex mixt.
from which were isolated 3 compds.: a methiodide with
MeI at the pyridine N, m. 174–6°; a methiodide, m.
198°, of monomethylated II of unknown structure, and a
dimethiodide of II, m. 228°. II.HX salts are almost un-
affected by MeI. Cf. *C.A.* 42, 571a.   G. M. Kosolapoff

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Action of alkyl halides on α- and α'-aminonicotines. M. S. Kondakova and Ya. L. Gol'dfarb. Doklady Akad. Nauk S.S.S.R. 66, 647-50(1949); cf. C. and K., C.A. 40, 4732.—Oxidation of the methylation product of α-aminonicotine by CrO_3 in dil. H_2SO_4 by 3 days' boiling gives a low yield of 1-methyl-3-imino-3-carboxy-1,2-dihydropyridine (I), m. 278-80° (from dil. EtOH). This, heated with 80% NaOH, gives 1-methyl-2(1H)-pyridon-3-carboxylic acid (II), m. 183° (from EtOH). Some II was isolated from the residual liquid obtained by treating the crude oxidation product with concd. HCl, as well as I. HCl, needles without definite m.p. I gives a picrate, m. 194-5° (from EtOH), and, on decarboxylation by heating to 280°, forms 1-methyl-2(1H)-pyridonimine, isolated as the picrate, m. 201°, and chloroplatinate, m. 308-10°. Hence, the methylation product of α-aminonicotine is 1-methyl-3-(1-methyl-2-pyrrolidyl)-2(1H)-pyridonimine; the product from α'-aminonicotine is probably analogous.

G. M. Kosolapoff

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Benzylation of amino derivatives of nicotine. Ya. I. Gol'dfarb and M. S. Kondakova (Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1950, 253-67; cf. *C.A.* 44, 3992e.—Refluxing 10 g. α′-aminonicotine, 15 g. of its di-HCl salt, 15 g. PhCH₂Cl, and 70 ml. abs. EtOH for 1 day yielded after concn., washing with dil. HCl, and extn. with C₆H₆, 4.3 g. *1-benzyl-5-(1-methyl-2-pyrrolidyl)-2-pyridonimine* (II), b, 213-14° (dipicrate, m. 208°), and 2.3 g. *benzyl-α′-aminonicotine* (I), m. 126° (from EtOH). Boiling 45 g. α′-aminonicotine with 24 g. BzH and 100 ml. 85% HCO₂H 20 hrs., followed by concn. *in vacuo*, gave 30 g. I (dipicrate, m. 204-5° (from EtOH-Me₂CO)). I (5 g.) with 1.4 g. NaNO₂ in 20% HCl gave 4 g. *nitroso deriv.-HCl*, decomp. 173° (from EtOH); *free nitroso deriv.*, yellow, m. 96° (from EtOH), is stable to hot alkali but decomp. in acid solns., yielding I. Refluxing 9 g. α′-aminonicotine with 6.5 g. PhCH₂Cl in EtOH, followed by concn., treatment with dil. HCl, and extn. with C₆H₆ gave 6.8 g. poorly distillable oil, b, 160-260°; no I was isolated directly and treatment of the product with NaNO₂ in HCl failed to give any nitroso deriv. (see above), but heating the reaction mixt. (after NaNO₂ treatment) with HCl, neutralization, and extn. with Et₂O-C₆H₆ gave an unstated yield of I. A similar reaction with α-aminonicotine (18 g.) gave 3.1 g. unreacted base and 15.3 g. *1-benzyl-3-(1-methyl-2-pyrrolidyl)-2-pyridonimine*, b, 201-1.5°; dipicrate, m. 207-8° (decompn.; from EtOH-Me₂CO); *perchlorate*, yellow crystals; *di-HCl salt*, solid (from EtOH). Refluxing 30 g. α-aminonicotine, 70 ml. 99% HCO₂H, and 16 g. BzH 3 days gave 2.4 g. *monobenzyl deriv.*, C₁₁H₁₆N₂, b, 177-8° (dipicrate, m. 186°); the structure of the

product is unknown, but the product does not form a nitroso deriv. PhCH₂I and α′-aminonicotine in EtOH give after standing overnight a high yield of the corresponding *quaternary salt*, m. 190° (from dil. EtOH); similar reaction with α-aminonicotine yielded a complex mixt. of: α-*aminonicotine-2PhCH₂I*, m. 200-2° (from EtOH), decomp. 104-5° (after drying *in vacuo*), which with hot KOH soln. gave green-yellow *1-benzyl-3-(1-methyl-2-pyrrolidyl)-2-pyridonimine-PhCH₂I* (bound at the pyrrolidyl N), m. 173-4° (III), and α-aminonicotine-PhCH₂I (bound at the pyridine N), m. 156° (from EtOH-Et₂O); the latter with KOH yields *1-benzyl-3-(1-methyl-2-pyrrolidyl)-2-pyridonimine*, identified by formation of a solid carbonate and dipicrate; the dipicrate of the iodobenzylate m. 208-10° (from EtOH-Me₂CO). Heating 1-benzyl-3-(1-methyl-2-pyrrolidyl)-2-pyridonimine with PhCH₂I in MeOH 1 hr. gave the corresponding iodobenzylate (bound at the pyrrolidyl N), m. 174°. Heating α-aminonicotine-PhCH₂I with PhCH₂I in MeOH gave III (after treatment with KOH), and the III salt of the starting material, m. 207°. Heating α-aminonicotine-III (a mixt. of free base and di-HI salt) with PhCH₂I in EtOH, gave an III salt, m. 206-7°, which with cold 50% KOH gave α-aminonicotine-PhCH₂I, m. 156°, identical with that described above; its III salt, m. 206-7°, is also obtainable from 1-benzyl-3-(1-methyl-2-pyrrolidyl)-2-pyridonimine carbonate and HI. The sepn. of pyridonimine derivs. from isomeric aminonicotine derivs. is best performed by treatment with CO₂, which yields an insol. carbonate from the former class. Substitution of PhCH₂Cl for PhCH₂I leads to a higher degree of substitution on the pyrrolidyl N atom.

G. M. Kosolapoff

tion gave AcOH and (CO₂H)₂; thus the primary chloride must have the structure I. *Santene* (from Siberian pine

(I)   (II)

oil) (211.5 g.), b₁₁ 35–7°, d₄⁰ 0.8640, n᷎ᴰ 1.46699, gave under similar conditions of chlorination 102 g. satd. *di-chloride*, C₉H₁₄Cl₂, m. 88–92°, and 37 g. *monochloride*, C₉H₁₃Cl, b₄ 40°, b. 105–7° (decompn.), m. 56–8°, contg. 20.1% allylic Cl, which on oxidation with KMnO₄ gave HCO₂H and the *keto acid*, C₉H₁₄O₃, previously described by Semmler (C..I. 2, 1139), while ozonolysis gave CH₂O. Hence the primary chlorination product has the structure II. Thus in both monochlorides the double bond had been transposed, which confirms the theoretical considerations given in Part I. **V. Reaction of chlorine with Δ³-carene.** D. Tishchenko and A. Khovanskaya. *Ibid.* 1003–7.— Carene isolated from turpentine, b₃ 74°, d₄⁰ 0.8628, n᷎ᴰ 1.4735 (*nitrosate*, m. 116°), was chlorinated as described previously with ice cooling; even at 1.5–2 mm. some decompn. took place on distn. of the products, but at 0.65 mm. distn. was satisfactory. The primary product (main reaction occurring to the extent of 83–85%) is a *monochloride* with transposed double bond, *3-chloro-Δ⁴-carene*, b₁₀ 27°, d₄⁰ 1.0095, n᷎ᴰ 1.5032, and 10–15% of the *said. di-Cl deriv.*, which could not be satisfactorily distd. or isolated in pure state, but the product was liquid, contrary to the assumption of crystallinity of all such substances. The monochloride contains 21.2% mobile, allylic Cl, and on ozonolysis gives a chloroketo aldehyde, C₉H₁₃O₂Cl, b. 67° (bath temp.) in a mol. still, d₄⁰ 1.1473, n᷎ᴰ 1.4995, while oxidation with KMnO₄ gave *cis-caronic acid*, m. 174–5° (isolated as the *Ag* or *NH₄ salt*), also obtained from the original carene. The crude dichloride with O₃ gave, on treatment with H₂O, an unstated amt. of fairly pure *di-chloride*, b₁₁ 97–101°, and analyzing satisfactorily for C₉H₁₄Cl₂. The results again confirm the theory advanced in Part I (*loc. cit.*).   G. M. K.

Action of alkyl halides on α- and α'-aminonicotines. II.
Ya. L. Gol'dfarb and M. S. Kondakova. *Izvest. Akad.
Nauk S.S.S.R., Otdel Khim. Nauk* 1950, 418-25; cf. *C.A.*
44, 3992c.—α-Aminonicotine (I) with EtI and PrI (in
EtOH or Me₂CO) yields almost exclusively the substitution
products in the pyridine part of the mol., while α'-aminonic-
otine (II) yields the alkuolides to the major degree. The
pptn. of the substitution products by CO₂ serves to show
their identity as N-alkylnicotinimines. The different be-
havior of the I and II lies in the internal H bond between the
2 N atoms in α-aminonicotine. Refluxing 17 g. I with 16
g. EtI in Me₂CO 3.5 hrs. gave 13 g. bases, b₂ 125-32°; re-
distn. gave 11.5 g. b₁ 156-7°, which on diazotization in
20% H₂SO₄ gave 1-ethyl-5-(1-methyl-2-pyrrolidyl)-2(1H)-
pyridonimine, b₂ 152-4° (pptd. by CO₂), whose *dipicrate* m.

194-5° (from EtOH). PrI gave the 1-Pr analog (III), b₂
145-6°; *dipicrate*, m. 180-1° (from EtOH). Heating
10.5 g. α'-aminonicotine with 10.5 g. PrI in abs. EtOH 2
days, followed by concn., addn. of aq. NaOH, diln. with
Et₂O and C₆H₆, and heating 1 hr. gave 3.9 g. distillate, b₄
100-78°, which formed a *solid carbonate* (2.2 g.), giving on
dry distn. the 5-(1-methyl-2-pyrrolidyl) isomer (IV) of
III, green oil, b₄ 165°, while the Et₂O-C₆H₆ insol. portion
yielded (after removal of the insol. carbonate) on extn. with
hot EtOH 5 g. α'-aminonicotine-PrI, m. 180-1° (from
EtOH). EtI reacted similarly in 3.5 hrs. in EtOH and gave
the 1-Et homolog of IV *pyridonimine*, b₄ 138-9°, whose
dipicrate m. 70-80° (contains 1 mole EtOAc, from which it
is crystd.).   G. M. Kosolapoff

KONDAKOVA, M. S.

Chem/Chemistry - Alkaloids

Sep/Oct 51

"Cyclization of Metanicotine Derivatives," Ya. L. Gol'dfarb, M. S. Kondakova, Inst of Org Chem, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 5, PP 610-619

In study of intramol ring-closing of aminometanicotine deriv, prepd 5-bromo-2-aminonicotine (I). Action of N-bromosuccinimide on I yielded 5-bromo-2-amino-3-(γ-bromo-δ-methylamino-α-butenyl)-pyridine (II). Action of alkali on II yielded isomeric mixt of 6-bromo-2-methylaminomethyl-1, 2-dihydro-1,8-naphthyridine (III) and base (IV) with

195T22

USSR/Chemistry - Alkaloids (Contd)

Sep/Oct 51

bromodihydropyridine structure. Action of MeI on III yielded 6-bromo-2-dimethylaminomethyl-1, 2-di-hydro-1, 8-naphthyridine (IV). With 2d mol of MeI, IV formed iodomethylate (V). With Hofmann fission V yielded trimethylamine and 2-methyl-6-bromo-1, 8-naphthyridine.

PA 195T22

195T22

KONDAKOVA, M.S.

Absorption spectra in the ultraviolet of some derivatives of pyridine and nicotine. III. K. A. Zhukova, M. S. Kondakova, and Ya. L. Gol'dfarb. Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci. 1952, 673-9(Engl. translation). —See C.A. 47, 401g.

H. L. H.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Electronic Phenomena
and Spectra

KONDAKOVA, M. S.

KONDAKOVA, M. S.

(2) Chem

CATALYSTS

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Organic Chemistry

Structure and some properties of bis(diphenylmethyl)thiophene. Ya. L. Gol'dfarb and M. S. Kondakova. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1952, 431–3.— Formation of a sulfone from 2,5-bis(diphenylmethyl)thiophene (I) inhibits halogen or acyl substitution in the 3- and 4-positions, and the sulfone is devoid of diene properties (maleic anhydride test). Refluxing 5 g. I in MePh with 25 g. Raney Ni 4 hrs. gave 2.4 g. (Ph₂CHCH₂CH₂)₄ (II), m. 122–3°, and a smaller amt. of a product, m. 83–107°. II was readily obtained by heating 0.5 g. (COCH₂CHPh₂)₂ with 0.2 g. Na, 7.25 ml. EtOH and 1.5 g. 56% N₂H₄ 29 hrs. at 190–200° in an autoclave; the pure II m. 123–4.5°. I (4.16 g.) in 25 ml. AcOH treated at room temp. with 8 g. 28% H₂O₂, then warmed to 104–5° 25 min. gave 4.5 g. crude, or 2.2 g. pure I *sulfone*, m. 172–3° (.... EtOH), insol. in alkalies, not reduced by Zn in hot HCl-AcOH. I with 2 moles Br in CHCl₃ gave the *mono-Br deriv.*, m. 127–9° (from EtOH), oxidized with CrO₃ in AcOH to Ph₂CO. Heating I sulfone with Raney Ni in MePh gave II, as above. I *sulfone* treated with Br in CHCl₃, for 6 days, gave a *di-Br deriv.*, m. 191–1.5° (from MePh-heptane), which appears to be an *addn.* rather than a substitution *product;* boiled with Zn in AcOH-HCl it gave I sulfone.   G. M. Kosolapoff

1. KONDAKOVA M.S., GOL'DFARB YA.L.

2. USSR (600)

4. Thiophene

7. Structure and some properties of dibenzohydrylthiophene, Izv,AN SSSR. Otd. KHIM. nauk no.6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, unclass.

KONDAKOVA - M.S.

A study of the hydrogen bond in α-aminopicoline by the method of comparison of infrared absorption spectra. Ya. L. Gol'dfarb, M. S. Kondakova, and D. N. Shigorin (N. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1956, 336-9; cf. C.A. 45, 1693h.—The presence of H bond of intramol. type was shown in α-aminonicotine by the infrared band in the cryst. solid at 3325 cm.⁻¹, while in CCl₄ soln. this is 3290 cm.⁻¹. The bond is ruptured or disturbed by the addn. of HX or MeI. The HCl salts of α-aminonicotine and α'-aminonicotine have similar spectra. The hydrogen bond exists between the 2 N atoms and must lie in the plane of pyrrolidine and pyridine rings. G. M. K.

Chem. Abstr. 1950, _____ — Passage of a rapid stream of HCl into 10 g. 2,5-dimethylthiophene (I), 50 ml. concd. HCl, and 18 ml. 40% formalin, with ice cooling 1 hr. gave
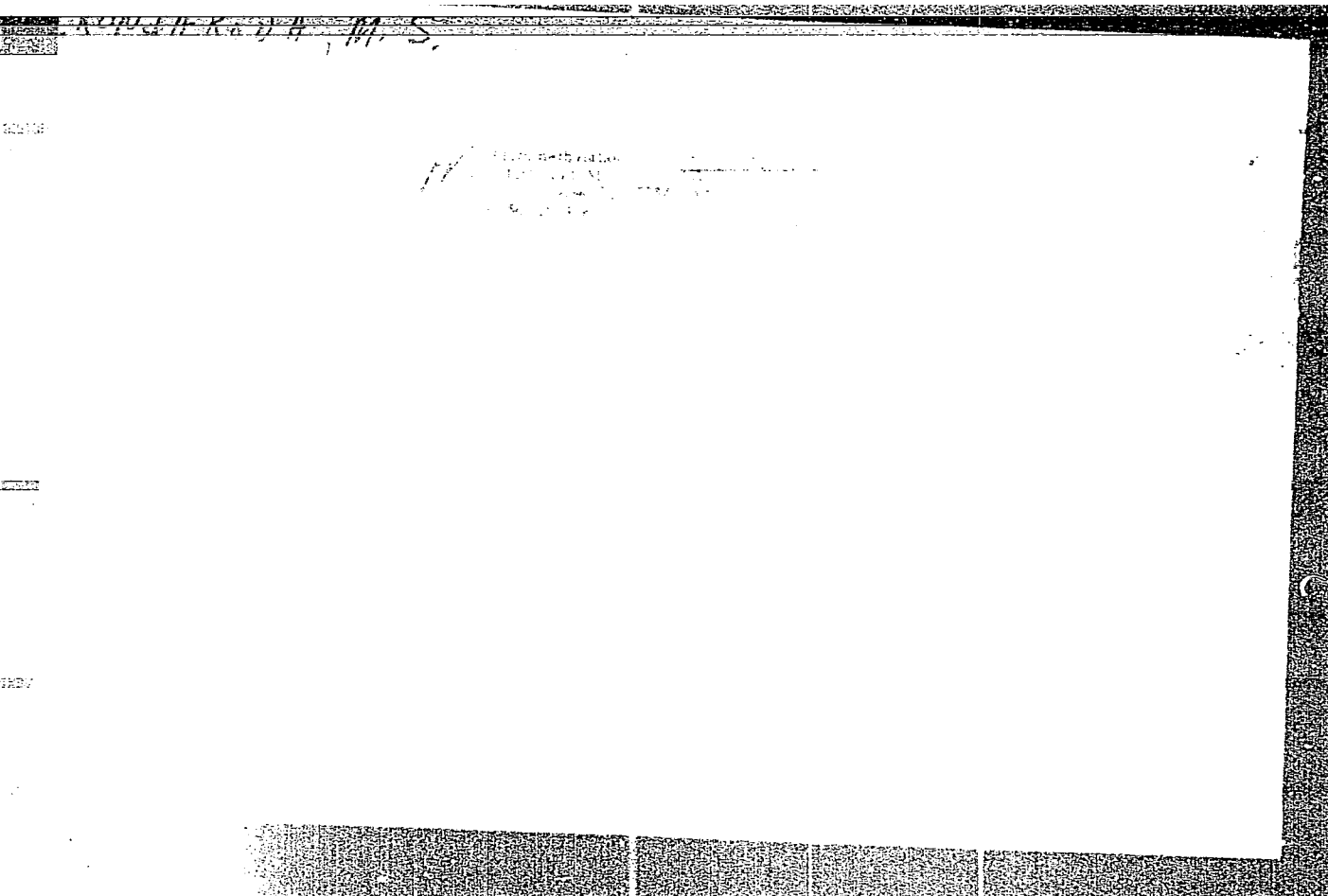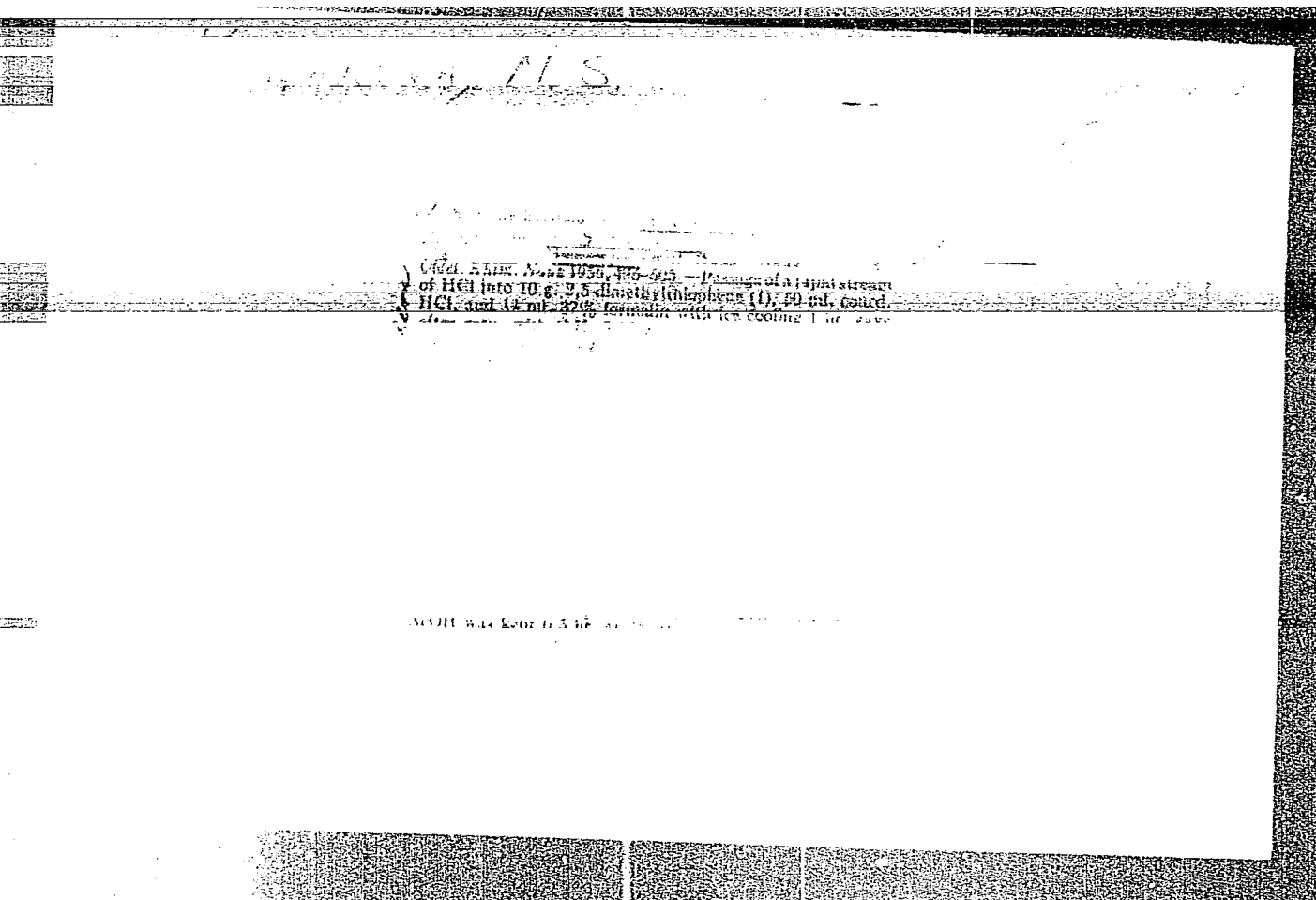
Gol'dfarb, Ya. L. + Kandalkova, N. S.

100 ml. AcOH was treated HCl, after satn. with which the
mixt. was treated over 1 hr. with ex
thiophene et al. ...

gave a 70 - yield of the dimethoxymethyl analog, m.
102.5°, and a larger amt. of 2,5-di-tert-butyl-3,4-dimethylene-
erythiophene (III) was obtained; the above glycol in part
...II heated with Ac...
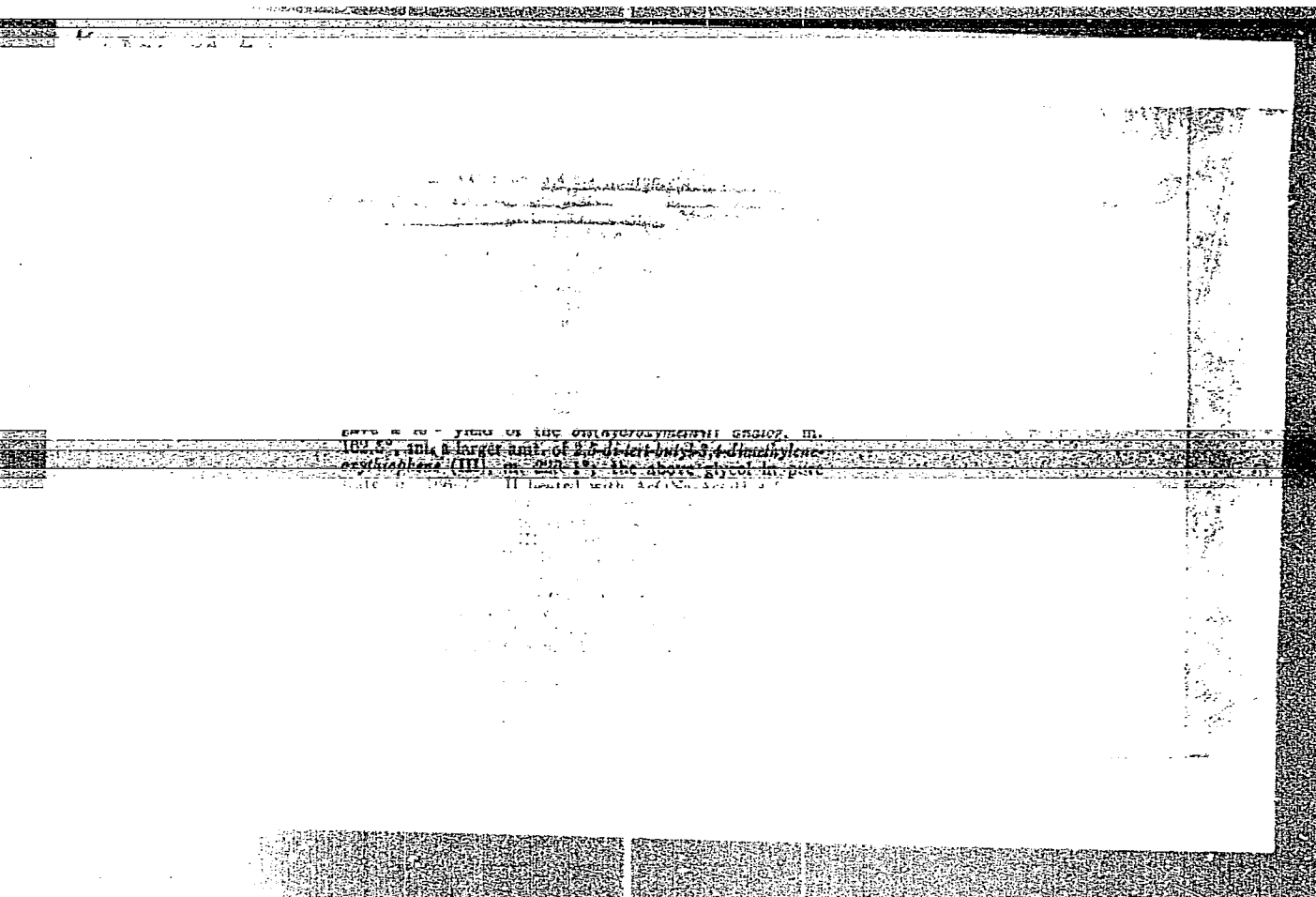
AUTHORS: Kondakova, M. S., Gol'dfarb, Ya.L.   62-58-5-1o/27

TITLE: Synthesis of Some Bifunctional Derivatives of 2,5-Dimethyl-
              thiophen (Sintez nekotorykh   bifunctsional'nykh proizvodnykh
              iz 2,5-dimetiltiofena)

PERIODICAL: Izvestiya Akademii Nauk SSSR Otdeleniye Khimicheskikh Nauk,
              Nr 5, pp. 59o - 599 (USSR) - 14ل8

ABSTRACT: Rather substantial quantities of 2,5-dimethylthiophen (Refer-
              ence 1) are found in sulfurous compounds which are formed due
              to the decomposition (heat-decomposition) of Kashpir-slate.
              It was of interest to investigate the possibility of syntheti-
              zation of simple bifunctional derivatives. 3,4-bis-(methyl-
              -chloride)-2,5-diomethylthiophen was used for obtaining a syn-
              thesis of the bifunctional derivatives of 2,5-dimethylthiophen.
              3,4-bis-(acetoxymethyl)-2,5-dimethylthiophen, 3,4-bis(oxy-
              methyl)-2,5-dimethylthiophen, 3,4-bis-(cyanomethyl)-2,5-di-
              methylthiophen, 3,4-bis-(ethoxymethyl)-2,5-dimethylthiophen,
              3,4-bis-(carboxymethyl)-2,5 dimethylthiophen (see formulae II
              to VI) were obtained by the action of corresponding reagents
Card 1/3   on 3,4-bis-(methyl-chloride)-2,5-dimethylthiophen. No symmetric

Synthesis of Some Bifunctional Derivatives of   62-59-5-1o/27
2,5-Dimethylthiophen

diamine, but 3-amino-methyl-4-methylaminomethyl-2,5-dimethyl-
thiophen was obtained by means of the hydrolisis of hexamin-salt
(formed from 3,4-bis-(methyl-chloride)-2,5-dimethylthiophen
and hexamethylene-tetramine). A compound of the structure
$C_{11}H_{16}N_2OS$ corresponding to the formula
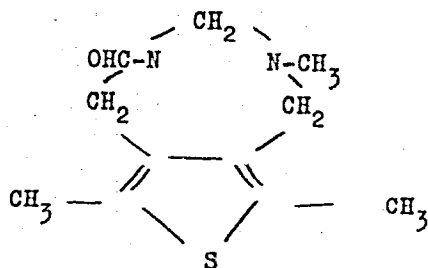
is formed as stereochemical product with the formation of dia-
mine. There are 2 figures and 14 references, 2 of which are
Card 2/3   Soviet.

Synthesis of Some Bifunctional Derivatives of
2,5-Dimethylthiophen   62-58-5-1o/27

ASSOCIATION: Institut organichoskoy khimii im. N. D. Zelinckogo Akademii
               nauk SSSR (Institute for Organic Chemistry imeni N. D. Ze-
               linskiy AS USSR)

SUBMITTED: December 1o, 1956

               1. Cyclic compounds--Synthesis

Card 3/3

5.3610

77359
SOV/79-30-1-20/78

AUTHORS: Gol'dfarb, Ya. L., Kondakova, M. S.

TITLE: Synthesis of Some (β -Chloroethyl)amino Derivatives of Thiophene

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 102-107 (USSR)

ABSTRACT: Several anticancerous compounds, β -chloroethylamino derivatives of thiophene, were synthesized from 3-chloromethyl- and 3,4-bis(chloromethyl)-2,5-dimethyl-thiophene. Reaction of chloromethylated thiophenes with β , β' -dichlorodiethylamine yielded compounds I, mp 171-172°, II, mp 183-185°, and III, mp 176-178°.
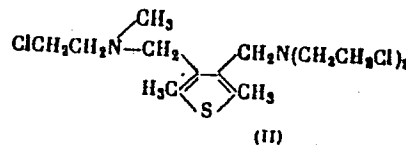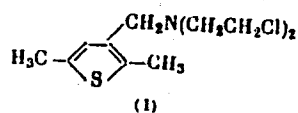
Card 1/5

Synthesis of Some (β -Chloroethyl)amino
Derivatives of Thiophene

77359
SOV/79-30-1-20/78

$$(ClCH_2CH_2)_2N-H_2C\text{---}\underset{CH_3\text{---}\underset{S}{\diamond}\text{---}CH_3}{\overset{CH_2N(CH_2CH_2Cl)_2}{}}$$

(III)

$$\underset{S}{\diamond}\text{---}CH_2N(CH_2CH_2Cl)_2$$

(IV)
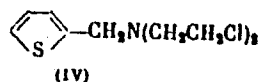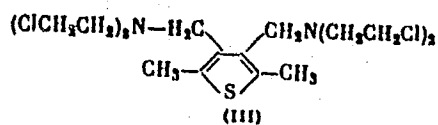
In order to find the effect of the displacement of di-
(β -chloroethyl)aminomethyl group in thiophene ring
from α to β position on physiological properties
of compound IV, yield 23.6%, mp 102-103°, the latter
was synthesized from compound VIII, bp 186-190° (7 mm),
n_D^{20} 1.5497.

$$\underset{S}{\diamond}\text{---}CH_2N(CH_2CH_2OH)_2 \quad ,$$
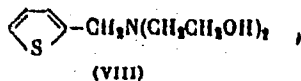
(VIII)

Card 2/5

Synthesis of Some (β -Chloroethyl)amino
Derivatives of Thiophene .

77359
SOV/79-30-1-20/78

Compound VIII was synthesized from a mixture of 2-thiophenealdehyde, diethanolamine, and formic acid by heating. Reaction of 3-chloromethyl-2,5-dimethylthio-phene with diethanolamine yielded compound VI, bp 184-197° (6 mm). This compound can be also prepared in the following way:
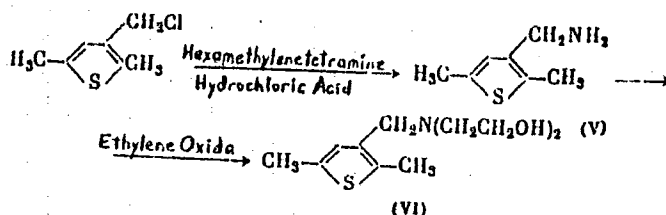
The starting base for synthesis of compound VII, bp 214° (2 mm), was obtained by the reaction of ethylene oxide and 3-aminomethyl-4-methylaminomethyl-2,5-dimethylthiophene.

Card 3/5

Synthesis of Some (β -Chloroethyl)amino   77359
Derivatives of Thiophene   SOV/79-30-1-20/78

$$\text{HOH}_2\text{CH}_2\text{C}-\overset{\overset{\displaystyle CH_3}{|}}{N}-\text{H}_2\text{C}, \quad \text{CH}_2\text{N}(\text{CH}_2\text{CH}_2\text{OH})_2$$

$$\text{H}_3\text{C}-\langle S \rangle-\text{CH}_3$$

(VII)
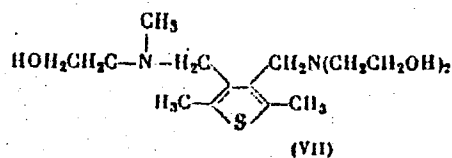
3-Aminomethyl-2,5-dimethylthiophene (V), yield 60%,
bp 100° (12 mm), was prepared from quaternary salt,
obtained from hexamethylenetetramine and 2,5-dimethyl-3-
thenyl chloride, alcohol, and concentrated HCl by heat-
ing on a water bath for 6 hr. All prepared compounds
were tested for toxicity and anticancerous activity by
P'an Ch'i-ts'ao at the Institute of Experimental
Pathology and Cancer Therapy of the Academy of Medical
Sciences of the USSR. All compounds are comparatively
toxic, especially compound IV with di(β -chloroethyl)
aminomethyl group in position α and are not very effec-
tive against cancer. Ibragimova, M. B., participated
in this work. The authors thank P'an Ch'i-ts'ao for
testing the prepared compounds. There are 17 references,

Card 4/5

GOL'DFARB, Ya.L.; KONDAKOVA, M.S.

Synthesis of bifunctional derivatives from 2, 5-dimethylthiophene.
Report No.2: Action of amines on 3, 4-bis(chloromethyl)-2, 5-
dimethylthiophene. Izv.AN SSSR Otd.khim.nauk no.3:501-513 Mr '61.
(MIRA 14:4)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Thiophene)   (Amines)

GOL'DFARB, Ya.L.; KONDAKOVA, M.S.; KRASNYANSKAYA, E.A.; VINOGRADOVA, M.A.

Synthesis of condensed systems based on 3,4-bis-(Chloromethyl)-
2,5-dimethylthiophene with eight-, ten-, and fifteen-membered
rings. Izv. AN SSSR Ser. khim. no.12:2182-2187 D '64
                                           (MIRA 18:1)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo AN SSSR.

SILAYEV, A.B.; NESMEYANOV, An.N.; FEDOSEYEV, V.M.; KONDAKOVA, N.V.

Synthesis of α,β -dimercaptopropionic acid, containing radioactive sulphur. Zhur.ob.khim. 27 no.10:2871-2873 O '57.

(MIRA 11:4)

1.Moskovskiy gosudarstvennyy universitet.
(Propionoic acid) (Tracers (Biology))

KONDAKOVA N.V.

COUNTRY   : USSR
CATEGORY   : General Biology·   B
               Physical and Chemical Biology.
ABS. JOUR.   : RZhBiol., No. 5, 1959, No. 18963

AUTHOR   : Eydus, L. Kh.; Kondakova, N.V.; Otarova, G. K.
INST.   : -
TITLE   : The Mechanism of the "Oxygen Effect" in
               Radiobiology.

ORIG. PUB.   : Biofizika, 1958, 3, No 2, 215-219

ABSTRACT   : It was shown that in a 4 mg/ml concentration,
               a myocin (I) solution which was freed from air
               and subjected to an X-ray irradiation of
               50,000 r in vacuum cuvettes, almost completely
               preserved its ATP (adenosine triphosphate)
               activity which may also be determined in
               anaerobic conditions by incubation with ATP,
               while irradiation with the very same dosage
               in aerobic condition leads to a 48 percent
               inactivation of I. After air is admitted into
               cuvettes which contain the irradiated solution,

Card: 1/3

ABS. JOUR.   : RZhBiol., No.   1959, No.

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB.   :

ABSTRACT   : (I) activity decreases rapidly ("oxygen leap"),
               although to a somewhat lesser degree than when
               irradiated under aerobic conditions. Analogous
               results were obtained when the (I) solution
               was irradiated by 25,000 r which usually leads
               to a 30 percent inactivation. The authors
               assume that the absorption of energy during
               anaerobic irradiation causes stimulation of (I)
               molecules ("preserved injury") only, and
               inactivation occurs under the influence of

CARD: 2/3

EYDUS, L.Kh., KONDAKOVA, N.V.

Mechanism of photodynamic effects. Biofizika 3 no.5:562-567 '58

(MIRA 11:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva

(LIGHT, effects,

photodynamic eff. on biol. objects in presence
of stein (Rus))

GANASSI, Ye.E.; KONDAKOVA, N.V.; OTAROVA, G.K.; EYDUS, L.Kh.

Common features of the manifestation of radiation aftereffect in proteins of different structure; comparative investigation of myosin and pepsin. Radiobiologiia 1 no.1:14-22 '61; (MIRA14:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(GAMMA RAYS—PHYSIOLOGICAL EFFECT)   (MYOSIN)
(PEPSIN)

KONDAKOVA, N. V.

Latent Lesions During Radiation-Induced Inactivation of Enzymes

L. Kh. Eidus, E. E. Ganassi and N. V. Kondakova

γ-radiation produces in the same protein molecules latent lesions of two kinds, one of which causes the inactivation of the enzyme during subsequent access of oxygen, and the other during post-radiation heating. The direct damage due to the combined after-effects in irradiated solutions of myosin is a large proportion of the total radiation damage.

The 'thermal' after-effect in myosin and pepsin enzymes of different nature and function is caused by the transition of some molecules to a state with a low activation barrier to thermo-inactivation. The degree of the 'thermal' after-effect and its energy of activation do not depend on whether the enzyme was irradiated dry or in solution. The method of electron paramagnetic resonance revealed in these enzyme molecules the presence of unpaired electrons with a long lifetime after irradiation in solution. These unpaired electrons are closely related to the radiation after-effect, and they disappear when the irradiated solutions are gently heated; at the same time the 'thermal' after-effect is obtained.

The same latent lesions as those after γ-irradiation were observed in the study of the photodynamic effect (PDE) in solutions of these enzymes in the presence of methylene blue or eosin. This is borne out by the activation barriers of the 'thermal' after-effect, the long lifetime of unpaired electrons, the form of the electron paramagnetic resonance spectra, and by other criteria which are identical for γ-radiation and for visible light (PDE). The mechanism of the formation of latent lesions due to the PDE, and the part played by O₂, are reported. Conclusions are drawn about the mechanism of inactivation of enzymes by ionizing radiation and by PDE, suggesting two stages, one of which is the formation of long-lived or short-lived latent lesions of the macromolecules.

Institute of Biophysics, Moscow, USSR

report presented at the 2nd Intl. Congress of Radiation Research,
Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

GANASSI, Ye.E.; ZARKH, Ye.N.; KONDAKOVA, N.V.; EYDUS, L.Kh.

Physicochemical study of the mechanism of enzyme inactivation.
Report No.1. Thermal inactivation of myosin and pepsin,
intact and following irradiation. Biofizika 10 no.6:966-973 '65.
(MIRA 19:1)

1. Institut biologicheskoy fiziki AN SSSR, Moskva. Submitted
April 29, 1965.

Kondakova, O.N.

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing.   M

Abs Jour   : Ref Zhur Biol., No 12, 1958, 53710

Author   : Kondakob, N.A., Kondakova, O.A.
Inst   : -
Title   : A New Flax Variety, T-5

Orig Pub   : Len i monoplya, 1957, No 12, 22-24

Abstract   : Variety testing conducted in 1953-1954 by the Tomsk
              Regional Selection Station showed that with regard to
              yield and the quality of the fibers, T-5 surpasses the
              Svetoch, Stakhanovets, Pobeditel' and Pryadil'shchik
              varieties, and is not inferior to them with regard to
              the yield of the seeds. This variety is resistant to
              damping off, has tall stems and is classed as a medium
              variety. On a production scale, it is recommended to
              sow it at the rate of 90-100 kg/ha. This variety was
              obtained by crossing varieties I-2 and B-1143 and sub-
              sequently selecting. -- A.M. Smirnov

Card 1/1

10.6000

31312
S/124/61/000/010/050/056
D251/D301

AUTHOR: Kondakova, O.N.

TITLE: Experimental verification of the calculation of a
               cylindrical shell of mean thickness

TEXT: A description is given of the experimental investi-
gation of the question of the degree of accuracy with which the ac-
tual stressed condition of shells with the ratio of thickness to
the radius of the mean layer lying in the region $1/15 - 1/3.7$, is
described according to the ordinary theory of the bending of shells
and also according to the theory which considers displacements due
to the action of transverse forces. The case of axisymmetric de-
formation is considered. It is shown that the ordinary theory gives
a considerable divergence from the experimental value of the stress

Card 1/2

Experimental verification...

S/124/61/000/010/050/056
D251/D301

(up to 45%), but the theory which considers shearing deformation
gives considerably less (up to 16%). /¯Abstracter's note: Complete   X
translation_7

Card 2/2

KONDAKOVA, O. N.

"Investigation of Bending of Bars and Plates Taking Into Account Shear Deformations from Transverse Forces." Cand Tech Sci, Leningrad Polytechnic Inst, Leningrad, 1953. Dissertation (Referativnyy Zhurnal--Mekhanika Moscow, Feb 54)

SO: SUM 186, 19 Aug 1954

KONDAKOVA, O.N.

Bend analysis of thin elastic plates with layers of increased
yielding capacity. Trudy LPI no.197:16-22 '58.

(MIRA 13:3)

(Elastic plates and shells)

KOLYASEV, P.Ye., doktor sel'skokhozyaystvennykh nauk; RASTEGAYEV, M.S., kandidat sel'skokhozyaystvennykh nauk; KONDAKOVA, R.S.

Mechanism of wetting a coarse organomineral granule and its effectiveness. Dokl.Akad.sel'khoz. 21 no.4:30-36 '56. (MLRA 9:8)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut. Predstavlena akademikom A.F. Ioffe.
        (Fertilizers and manures) (Soil moisture)

encephalitis (encephalitis

... with the period ...
... is have a ...
... period of epidemic an...
... encephalitic ...
... differential ...
... with the following forms: 1) with hepatolenticular degenera-
tion, where a syndrome reminiscent of Parkinsonism is found, with tremors
... dystonias. The principal symptom dis...
... symptoms ...
... and ...
... in which ptosis and oculomotor first ...
... weakly an apha...
... in the ...
... an epidemic ...
... has much ...
... feverish ...
... Distinguishing ...
... in the form of ...
... for differential diagnosis epidemiological analysis is
also important; 4) tick-borne encephalitis is a variant ...
... found in Eastern Siberia.

Card   3/3

KONDAKOVA, V.Ye., Cand Biol Sci -- (diss) "Effect of ecological
factors on the voltinism of the oak silk worm in the central
belt of the USSR." Kiev, 1959, 9 pp (Acad Sci UkSSR. Inst
of Zoology) 150 copies (KL, 35-59, 113)

- 28 -

KONDAKOVA, Ye.I.

Carnivorous mushrooms of the Moscow region. Dokl. Akad. sel'khoz.
23 no.3:28-33 '58.   (MIRA 11:4)

1. Moskovskaya sektsiya zashchity rasteniy.
            (Moscow Province--Insectivorous plants)

GORLENKO, M.V.; KONDAKOVA, Ye.I.; PLETNEVA, O.I.

Biology of predaceous fungi. Biul.MOIP. Otd.biol. 64 no.5:
89-97 S-O '59.   (MIRA 13:6)
            (FUNGI)   (NEMATODA)

KONDAKOVA, Ye. I., Cand Biol Sci -- (diss) "Predatory fungi in the
Moscow area and the possibility of employing them in the battle against
gallic nematodes in covered locations." Moscow, 1960. 14 pp; (Moscow
Order of Lenin and Order of Labor Red Banner State Univ im Lomonosov);
110 copies; price not given; (KL, 51-60, 117)

KONDAKOVA, Ye.I.

Species of predaceous fungi in the Moscow area. Trudy VIZR no.14:
143-158 '60.   (MIRA 14:2)
(Moscow Province—Fungi, Predatory)
(Parasites—Nematoda)

KONDAKOVA-BARLAMOVA, L.P.

Hardening the student in school and at home. Trudy 1-go MMI
5:206-209 '59.   (MIRA 13:8)

1. Iz kafedry shkol'noy gigiyeny (zav. - dotsent M.D. Bol'-
shakova) 1-go Moskovskogo ordena Lenina meditsinskogo instituta
im. I.M. Sechenova.
                    (PHYSICAL EDUCATION FOR CHILDREN)

KONDAKOVA-BAKLAMOVA, L.P., assistent; KARDASHENKO, V.N., assistent

Conditioning children's bodies as part of the daily regimen in boarding schools. Gig.i san.   25 no.1:100-104 Ja '60.

(MIRA 13:5)

1. Iz kafedry gigiyeny detey i podrostkov I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
           . (GYMNASTICS)

BOL'SHAKOVA, M.D.; KARDASHENKO, V.N.; KONDAKOVA-BARLAMOVA, L.P.; STROMSKAYA,
        Ye.P. (Moskva)

    Physical development of children in the city of Orel (1943-1959).
    Sov.zdrav. 20 no.5:9-13 '61.   (MIRA 14:5)
              (OREL—CHILDREN—GROWTH)

KONDAKSAZOV, N.A.

Problem of idiosyncrasy to antibacterial preparations. Probl. tuberk.,
Moskva no. 1:65-66 Jan-Feb 1953.   (CLML 24:2)

1. Of Otdykh Tuberculosis Sanatorium.

KONDAKBAZOV, N.A.

Obturational atelectasis as a result of tuberculous infection of
the bronchi [with summary in French]. Probl.tub. 36 no.2:103-104
'58   (MIRA 11:5)

1. Glavnyy vrach tuberkuleznogo sanatoriya "Otdykh"
        (ATELECTASIS, etiol. and pathogen.
            bronchial tuberc., ther. (Rus))
        (TUBERCULOSIS, PULMONARY, compl.
            atelectasis, ther. (Rus))

SKALINSKY, E.I.; KONDALENKO,V.F.

Electron microscopic studies of the chick chorio-allantois during embryogenesis. Acta morph. acad. sci. Hung. 12 no.3: 247-259 '64

1. Department of Electron Microscopy, Laboratory of Viral Preparations (Head: Prof. N.V.Likhachev), State Institute for Research and Testing of Veterinary Products, Moscow.

KONDALENKO, V.F.

Use of lead nitrate to bring out the intracellular reticular appara-
tus. Biul. eksp.biol.med. 47 no.1:121 Ja.'59.   (MIRA 12:3).

1. Iz kafedry gistologii (zav. - prof. I.F. Ivanov) Moskovskoy
veterinarnoy akademii. Predstavlena deystivitel'nym chlenom AMN
SSSR V.N. Chernigovskim.
          (LEAD NITRATE) (STAINS AND STAINING (MICROSCOPY))

SKALINSKIY, Ye.I.; KONDALENKO, V.F.

Electron microscopic study of the chorioallantoic membrane
in the chick embryo. Arkh. anat., gist. i embr. 44 no.4:44-
47 Ap '63.   (MIRA 17:6)

1. Otdel ekektronnoy mikroskopii (zav. lab. deystvitel'nyy chlen
Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.
Lenina prof. N.V. Likhachev) Gosudarstvennogo nauchno-kontrol'-
nogo instituta veterinarnykh preparatov Ministerstva sel'skogo
khozyaystva SSSR, Moskva. Adres avtora: Moskva, D-22, Zvenigorodskoye
shosse, 5. Gosudarstvennyy nauchno-konstrol'nyy institut veterinarnykh
preparatov Ministerstva sel'skogo khozyaystva Soyuza SSR, Otdel
elektronnoy mikroskopii.

KONDALEV, A. I. and MALINOVSKIY, B. N.

"Dynamic Flip-Flop & With Triode Transistors."

The authors describe a dynamic flip-flop using point-contact triode trans
sistors, discuss its circuit and provide experimental data on its performance
under various operating conditions. There are no references.

voprosy vyschislitel'noy matematiki i tekhniki (problems in Computor Mathematics
and Technique) Kiev, Izd-vo AN Ukr SSR, 1958, 97 pp. (Sbornik trudov, vyp 3)

This collecton of articles issured by the computor Center of Ukr SSR Acad
Sci is intended for scientists and engineers in the field of computor mathematics
and techniques. The collection is devoted to the programming of mathematical
problems on electronic computers and to the design of units and components of
these machines.

9,2560

82847

S/112/60/000/009/004/006

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1960, No. 9, p. 263,
4.8155

AUTHORS: Kondalev, A. I., Malinovskiy, B. N.

TITLE: A Transistorized Dynamic Flip-Flop

PERIODICAL: Sb. tr. Vychisl. tsentra AS UkrSSR. 1958, No. 3, pp. 71-75

TEXT: The authors describe the circuit of a dynamic flip-flop consisting
of a transistor and an inductance connected to the emitter circuit. In the
initial state the transistor is blocked by a bias. Negative master pulses
enter the base of the transistor, the amplitude of these pulses being too low to
open the transistor. If one positive pulse is supplied to the circuit input,
the transistor is opened and current is originated in the emitter circuit. On
account of the inertness of inductance, this current continues to flow up to
the arrival of the following masterizing pulse which again opens the transistor.
The excited state of the flip-flop corresponds to this, during which master
pulses are passing the collector circuit. The following pulse being supplied

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82847

A Transistorized Dynamic Flip-Flop   S/112/60/000/009/004/006

to the input, the transistor is blocked and the flip-flop returns to its
initial state. There are 7 figures.

A. V. Sh.

Translator's note: This is the full translation of the original Russian
                    abstract.

Card 2/2

16(1),16(2)

AUTHOR: Kondalev, A.I.   SOV/42-14-4-24/27

TITLE: New Investigations on the Domain of Computer   Mathematics
              and Techniques (According to the Data of the Conference of
              the Computing Center of the AS USSR)

PERIODICAL: Uspekhi matematicheskikh nauk, 1959,Vol 14,Nr 4,pp 237-242(USSR)

ABSTRACT: On December 1-3, 1958 a conference on computation mathematics
              and techniques took place in Kiyev. There were about 300
              participators from Moscow, Leningrad, Minsk, Tbilisi, Riga,
              Baku, Yerevan, L'vov. Lectures of: V.M.Glushkov, L.N.Dashevskiy,
              A.I.Kondalev, S.B. Pogrebinskiy, Ye.A.Shkabara, Ye.L.Yushchenko,
              M.A.Kartsev, Yu.A.Lavrenyuk, K.S.Neslukhovskiy, V.A.Shamanskiy,
              V.N.Ostapenko, Yu.V.Blagoveshchenskiy, A.N.Kostovskiy, V.V.Ivanov,
              Ye.Ya.Remez, L.N.Karamzina, E.A.Chistova, V.G.Bodnarchuk, G.S.
              Khovanskiy, A.I.Khora, P.S.Bondarenko, V.S.Mikhalevich,
              D.M.Golenko, A.A.Alekseyev, N.Z.Shor, V.S.Korolyuk, Ye.L.
              Yushchenko, A.A.Letichevskiy, L.N.Ivanenko, Bratchikov,
              N.A.Kachanova, E.I.Arin', V.V.Umed'yan, S.Ya.Fitialov, N.A.
              Krinitskiy, V.N.Igolkin, M.N.Belkina, Gavrilenko, I.V.Lebedev,
              Yu.I.Sharapov, Z.S.Zorina, A.M.Samofalova, Ye.A.Shkabara,
              M.A.Kartsev, A.G. Kukharchuk, N.M.Protsenko, N.P.Brusentsov,

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New Investigations on the Domain of Computer
Mathematics and Techniques (According to the Data   SOV/42-14-4-24/27
of the Conference of the Computing Center of the
AS USSR)

M.N.Posnov, V.D.Rozenknop, L.M.Abalyshnikova, V.I.Dvorteina,
S.B.Pogrebinskiy, G.A.Ososkov, V.G.Sragovich, Z.L.Rabinovich,
K.S.Neslukhovskiy, Yu.A.Chernyshev, Ye.F.Berezhnaya, O.V.Bachin,
A.Ya.Zubatenko, Z.V.Al'ferova, A.A.Spirin, B.I.Kal'nin, Yu.K.
Cherevychnik, A.G.Shigin, O.K.Shcherbakov, Yu.M.Shamayev,
A.I.Pirogov, Ye.I.Mamonov, V.D.Losev, A.G.Semenovskiy, V.I.Sokrut,
L.Z.Zabludovskaya, Ye.L.Shkabara, Ye.L.Yushchenko, G.Ye.Pukhov,
V.M.Samus', N.P.Khazankina, V.M.Bondarenko, L.A.Tel'ksnis,
V.N.Ostapenko, and A.A.Yushchenko.
A collective report on the work of the conference shall be
published soon (1 volume).

Card 2/2

KONDALEV, A.I. [Kondaliov, A.I.]

Analysis of the performance of a diode capacitor memory
system. Zbir. prats' z obchys. mat. i tekh. 2:60-76 '61.
(MIRA 15:2)
(Electronic calculating machines)
(Information storage and retrieval systems)

35211
S/696/61/002/000/009/009
D299/D302

9.7140 (also 1147, 1164, 2702)

AUTHORS: Kondalyev, A.I. and Zubatenko, A.Ya.

TITLE: Experimental diode-capacitor working memory (DCWM)

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Obchyslyuval'nyy tsentr.
              Zbirnyk prats' z obchyslyuval'noyi matematyky i tekhniky,
              v. 2, 1961, 105-110

TEXT: A memory device incorporating linear capacitors and diodes, was
tested as a modified version of the working memory of the computer "Kyyiv".
The working memory has to meet the following requirements: 1) Storing
capacity--1023 binary 41-digit numbers; 2) circulating frequency-- at
least 100 kc; 3) the codes received by, and transmitted from, the working
memory, are in the form of standard pulses (suitable for the computer).
The autonomy principle, used in design of the computer Kyyiv, was also
used in developing the control system of the DCWM. The connection is
described between the DCWM and the other computer units. In order to
test the operation of the diode-capacitor memory and to determine the
characteristics of its control elements, an experimental modell for 16

Card 1/3

Experimental diode-capacitor ...

S/696/61/002/000/009/009
D299/D302

eight-digit numbers was constructed. The model incorporated the main DCWM controll units, as planned for the computer Kyyiv. The model had the following units: A (4-digit) address register, a (4-digit) address counter, a commutation unit, decoder, amplifier etc. The following problems could be investigated on the model: 1) the dependence of its operation on the diode characteristics; 2) the dependence of storing time on the parameters of the memory unit; 3) the effect of the displacement voltages and of the pulse amplitudes on its operation; 4) the dependence of the read-signal level on the parameters of the memory unit; 5) the influence of regeneration frequency on storing time; 6) the influence of temperature conditions on its operation. In selecting the diodes, 7 types were investigated. It was found that the diode $A1\beta$ (DIV) had the most convenient characteristics ($R_{rev}/R_{dir}=28000$). The storing time depends not only on the reverse resistance R_{rev}, but also on the capacitance C.
An increase in displacement voltage led to a decrease in storing time. The maximum storing capacity was found to be 128 or 256 codes, with the given diode type. A temperature increase to $+50^{\circ}$C, led to a lowering of

Card 2/3

S/696/61/003/000/003/011
D251/D304

9.7140

AUTHOR: Kondalyev, A.I.

TITLE: Transformer passive memory units

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Obchyslyuval'nyy
            tsentr. Zbirnyk prats' z obchyslyuval'noyi matematyky
            i tekhniky, v. 3, 1961, 17 - 24

TEXT: A passive memory unit is defined as a one-way exchange of
information from other units of a computer. A PMU must only yield
information at the moment of applying the testing impulse, i.e. the
memory cell of the PMU cannot have two stable states as in the sta-
tic MU's and will not be useful for signal delay as in the dynamic
MU's. The author states that transformer type memory cells, as used
e.g. in the PMU of the 'Kyyiv' computer, are best with regard to
expectancy, simplicity of construction, high working speed, small
dimensions and stability. The construction and working of such a
cell is described in detail, and typical oscillograms are given.
There are 8 figures and 1 Soviet-bloc reference.

Card 1/1

KONDALEV, A.I. [Kondaliev, A.I.]

Passive transformer memory device. Zbir. prats' z obchys. mat. i tekh. 3:17-24 '61. (MIRA 15:2)
(Magnetic memory (Calculating machinery))

KONDALEV, A.I. [Kondaliev, A.I.]; ZUBATENKO, A.Ya.

Experimental diode capacitor memory system. Zbir.
prats' z obchys. mat. i tekh. 2:105-110 '61. (MIRA 15:2)
(Electronic calculating machines)
(Information storage and retrieval systems)

44929

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S/745/62/000/004/004/007
D201/D308

AUTHOR: Kondalev, A. I.

TITLE: An analog-to-digital pulse-weighting converter

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Vychislitel'naya tekhnika, no. 4, 1962, 39-53

TEXT: The author considers a possible version of an analog-to-digital converter. Its main feature is the mechanism of obtaining and of addition of reference voltage pulses required for the conversion, based on the principle of weighting, of a continuously varying voltage by means of reference pulses of short duration. The circuit diagrams of the converter and its time-operation diagram are given. Conclusion: the pulse weighting method in analog-digital conversion has the following advantages: 1. High conversion speeds are obtained with comparatively low frequencies of timing pulses. 2. Simple circuitry gives greater accuracy than electronic converters. 3. It is possible to control, within narrow limits, a wide range of continuous varying voltages of opposite polarity. 4. The converter

Card 1/2

An analog-to-digital ...   S/745/62/000/004/004/007
                                         D201/D308

may work in conjunction with nearly every type of transducer. 5. No
special radio engineering components are required. There are 6 fi-
gures.

Card 2/2

KONDALEV, A.I., kand.tekhn.nauk

Universal converter of the information presentation. Avtom.i prib.
no.1:27-32 Ja-Mr '63.   (MIRA 16:3)

1. Institut kibernetiki AN UkrSSR.
                    (Electronic computers)

ACCESSION NR: AP4020316   S/0302/64/000/001/0037/0040

AUTHOR: Kondalev, A. I. (Candidate of Technical Sciences); Yudin, Yu. S.

TITLE: High-speed device for determining polarity and comparing voltages with high precision

SOURCE: Avtomatika i priborostroyeniye, no. 1, 1964, 37-40

TOPIC TAGS: polarity detector, instantaneous polarity detector, voltage difference measuring device, difference millivoltmeter, transistorized difference millivoltmeter

ABSTRACT: Conventional Schmitt's triggers have a low sensitivity and, therefore, are unsuitable for measuring small signals; also, they are subject to drifts and ambient-temperature influence. A new transistorized device is largely free from the above shortcomings and can determine instantaneous polarity of a-c voltages from a few millivolts to a few tens of volts; also, it can measure the

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ACCESSION NR: AP4020316

difference between two voltages within the same range. The device (see Enclosure 1) comprises: a balanced differential amplifier, T_1 T_2 T_3; two amplifier-inverters, T_4 T_5; two separating amplifier-inverters, T_6 T_7; two comparator diodes with blocking oscillators, D_1 D_2 T_8 T_9; two output pulsed forming amplifiers (damping diodes D_3 D_4, transistors T_{10} T_{11}). P403 transistors are used in the blocking oscillators, P13 transistors in all other places; diodes are silicon D106. The device is essentially a dynamic polarity recorder; a "static trigger" is necessary for the "static recording" of polarity. Orig. art. has: 1 figure.

ASSOCIATION: Institut kibernetiki AN UkrSSR (Institute of Cybernetics, AN UkrSSR)

SUBMITTED: 00   DATE ACQ: 31Mar64   ENCL: 01

SUB CODE: GE, EE   NO REF SOV: 001   OTHER: 000

Card 2/3

KONDALEV, Andrey Ivanovich; IIM FEYEV, B.B., doktor tekhn. nauk,
otv. red.; YEVSEYENKO-MISYURENKO, I.V., red.

[Data form converters] Preobrazovateli formy informatsii.
Kiev, Naukova dumka, 1965. 175 p.   (MIRA 18:8)

KONDAIEV, A.I., kand. tekhn. nauk

    Analog-to-digital converter with a passive coding memory device.
    Avtom. i prib. no.2:32-34 Ap-Je '63.   (MIRA 18:8)

    1. Institut kibernetiki AN UkrSSR.

L 10787-66   EWT(d)/EWP(1)   IJP(c)   BB/GG/JXT(CZ)

ACC NR: AP6001513
                                        SOURCE CODE: UR/0302/65/000/004/0023/0025

AUTHOR: Kondalev, A. I. (Candidate of technical sciences); Semeshko, Ye. A.;
Siverskiy, P. M.

ORG: none

TITLE: Analog-to-digital converter for magnetic-tape signal coding and entry into a
digital computer

SOURCE: Avtomatika i priborostroyeniye, no. 4, 1965, 23-25

TOPIC TAGS: analog digital converter, analog digital encoder

ABSTRACT: The Institute of Cybernetics of the Academy of Sciences USSR has developed
a printed-circuit transistorized A/D converter with the following characteristics:
analog input range, from -2.54 to +2.54 v; digital word length, 7 bits for input
signals at 200 cps—18 kc and 8 bits for signals at 0—200 cps; sampling rate, variable
from 500 kc up to fractions of cps; input resistance, 100 kohm; threshold sensitivity,
10 mv; conversion time, 0.5—1 µsec; power consumption, 100 w; and operating tempera-
ture range, 18—30C. The principle of operation is as follows: A null circuit con-
tinuously compares the input analog U(t) and quantized reference voltage U_{ref} and in
case of nonagreement sends pulses to one of two inputs of the reversible counter. The
counter in turn changes the reference voltage in the direction of diminishing non-
agreement. The counter contents (representing the digital equivalent of the analog

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                                        UDC: 681.142.621

L 10787-66

ACC NR: AP6001513

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input) always vary and follow the analog voltage and stop only if $|U(t) - U_{ref}| < 10$ mv. The counter may be sampled at a rate suitable for subsequent information recording on magnetic tape, perforator, punched card unit, or direct computer input. Orig. art. has: 1 figure and 1 table.

[BD]

SUB CODE: 09/ SUBM DATE: none/ ATD PRESS: 4168

Card 2/2

L 26399-66   EWT(d)/T/EWP(1)   IJP(c)   GG/BB

ACC NR: AM6025457   Monograph   UR/
                                                                   44
Kondalev, Andrey Ivanovich   B+1

Code converters (Preobrazovateli formy informatsii) Kiev, Izd-vo "Naukova dumka,"
  1965. 175 p. illus., biblio. (At head of title: Akademiya nauk Ukrainskoy SSR.
  Institut kibernetiki) 3400 copies printed. Series note: Seriya po novoy tekhnike.

TOPIC TAGS: information processing, analog digital converter, digital analog converter

PURPOSE AND COVERAGE: This book is intended for engineers and scientists working in
  the field of analog-digital technology. Modern methods of analog-to-digital and
  digital-to-analog information conversion are covered. Structural-functional dia-
  grams and the technical characteristics of several types of analog-digital con-
  verters, developed at the Institute of Cybernetics of the Academy of Sciences,
  UkrSSR are dealt with in detail. A brief general review and classification of all
  these devices is also given.

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ACC NR: AM5025457

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ACC NR: AM6025457

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SUB CODE: 09/ DATE SUBM: 04Jun65/ ORIG REF: 033/ OTH REF: 028/

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L 38189-66   EWT(d)/EWP(1)   IJP(c)   GG/BC/BB/GD

ACC NR: AT6017036   SOURCE CODE: UR/0000/65/000/000/0140/0145

AUTHOR: Kondalev, A. I.

ORG: none

TITLE: An analog-to-digital servo-type converter

SOURCE: AN UkrSSR. Kiberneticheskaya tekhnika (Cybernetic techniques). Kiev,
Naukova dumka 1965, 140-145

TOPIC TAGS: servosystem, analog to digital converter, logic element, pulse
coding

ABSTRACT: The article deals with a class of servo-converter which may be satis-
factorily used in single-channel analog-to-digital conversion systems. The specific
type considered employs a method based on the coding of a continuous quantity and
uses a twin-channel generator null-organ for signal comparison. The principal
components of this converter are described. These include an n-place reverse
counter consisting of n trigger cells and a logic unit, as well as a reference voltage
unit. A block diagram of the converter is given and the operation of the different
components is briefly described. Carry-over provision is incorporated in this
converter and reliability is high. Current stabilizers are also employed for com-
parison of the continuous voltage with the standard. The purpose and special fea-

Card 1/2

Card 2/2

L 38190-66   EWT(d)/EWP(1)   IJP(o)   GG/BB/GD

ACC NR: AT6017037   SOURCE CODE: UR/0000/65/000/000/0155/0164

AUTHOR: Kondalev, A. I.

ORG: none

TITLE: A position-comparing converter with a variable number of strokes

SOURCE: AN UkrSSR. Kiberneticheskaya tekhnika (Cybernetic techniques). Kiev, Naukova dumka, 1965, 155-164

TOPIC TAGS: analog digital converter, computer coding, cyclic coding, circuit design, computer theory

ABSTRACT: Any binary coding position-comparing converter requires a constant number of stroke pulses, equal to the position of the code n, in order to execute a complete coding cycle. The author discusses the possibility of reducing the number of strokes while retaining the former positioning of the codes. An investigation is made into the operational circuit of an analog-to-digital converter having a variable number of strokes. The minimum cycle of this converter comprises one stroke, the maximum cycle comprises n strokes. Depending on the relationship of the voltages being compared (continuous $U(t)$ and standard U_{st}) in the converter, it is possible to complete the cycle on any stroke: the first, the second, ..., $(n - 1)$-th, or n-th. Thus, the converter being studied has a lower mean coding time, and,

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L 38190-66

ACC NR: AT6017037

consequently, a greater mean response time than known position-comparing converters. The realization of such an analog-to-digital converter is based on the assumption that all the codes in the set of digital equivalents used for coding continuous signals are equivalent and among them a series of codes has on the end one, two, three, etc. zeros. The variable-stroke converter described may be *efficiently* applied in a waiting-time mode. Orig. art. has: 7 formulas and 2 figures.

SUB CODE: 09/ SUBM DATE: 28Jul65/ ORIG REF: 002/ OTH REF: 000

Card 2/2   JS

ACC NR: AP7001826   SOURCE CODE: UR/0119/66/000/012/0017/0019

AUTHOR: Kondalev, A. I. (Candidate of technical sciences);
Semeshko, Ye. A. (Engineer)

ORG: none

TITLE: High-speed balancing unit for cooling signals with a wide
frequency spectrum

SOURCE: Priborostroyeniye, no. 12, 1966, 17-19

TOPIC TAGS: analog digital converter, trigger circuit, pulse signal,
pulse generator, transistorized amplifier, negative feedback, pulse signal,

ABSTRACT: A high-speed balancing unit is described for comparing
cooling signals with reference signals from the time intervals
determined by the frequency of coding pulses. The unit consists of a
differential amplifier, a wide-band amplifier, a Schmidt trigger and
two-channel controlled pulse generator (see Fig. 1).
Differential transistorized amplifier (T_1-T_5 transistors) separates and
amplifies the signal of the difference between the voltage of the
coding signal and the reference signal. This separated difference is
in turn amplified by wide-band amplifier (T_6-T_8 transistors). In order
to stabilize operating conditions and to expand transmission band, all

Card 1/3   UDC: 621.3.083.4

ACC NR: AP7001826
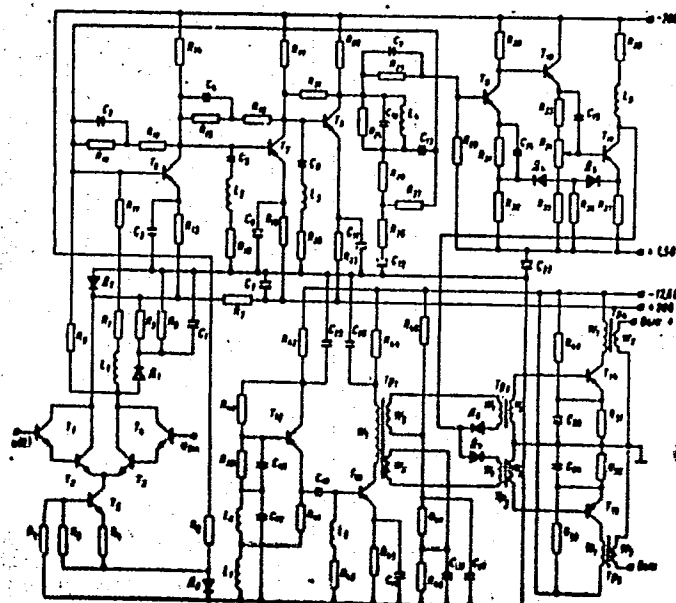
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ACC NR: AP7001826

stages are provided with deep negative feedbacks (R_{10}; R_{12}; C_2; R_{15}; R_{16}; C_4; and R_{21}- networks). The stability of input resistances of the first and third amplifier stages is ensured by the C_5, L_2, R_{18}, and C_8, L_3, R_{20} networks.by reducing the input resistances of these stages to low frequencies. In addition to the local negative feedbacks, the amplifier as a whole is covered by a frequency-response feedback from the T_8 collector. All galvanometric couplings are used in the wide-band amplifier, even with differential amplifier. The Schmidt trigger (T_9-T_{11} transistors) serves as a valve for switching-over pulse-channels of the balancing unit. The two-channel pulse generator consists of master oscillator based on a three-point Hartley oscillator (T_{13}), an amplifier-shaper, and the amplifiers for the summation and subtraction channels (T_{14}, T_{15}). The described unit may be used in analog-to-digital converters with bit-by-bit comparison, when high-speed of coding is necessary. In such cases, it is not necessary to use the two-channel pulse generator, and the logical networks in the pulse distribution block can be easily controlled by the output potentials of Schmidt trigger. Orig. art. has: 1 figure.

[KM]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 001

Card 3/3

KONDALCV, I. I.

OGURTSOV, Anatoliy Il'ich, inzhener; KONDALOV, I.I., professor, redaktor; AKULOV, N.P., kandidat tekhnicheskikh nauk, redaktor; SAFONOV, P.V., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy redaktor

[Hydraulic fill methods for building earth dams] Namyv zemlianykh sooruzhenii. Pod obshchei red. I.I.Kandalova. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit., 1957. 177 p.   (MLRA 10:10)
    (Dams)

KONDALOV, Yu.P.

Associated foci of Dendrolimus sibiricus Tschtv., Ocneria dispar L., and Semiothisa pumila Kusn. in larch forests of Krasnoyarsk Territory. Uch. zap. Kras. gos. ped. inst. 15:183-193 '59.   (MIRA 14:12)
(Krasnoyarsk Territory—Moths)
(Larch—Diseases and pests)

S/205/63/003/001/026/029
E065/E485

AUTHORS: Vavilov, P.P., Verkhovskaya, I.N., Kondaneva, R.P.,
              Popova, O.N.

TITLE: The growth and development of Vicia faba L. under
              conditions of increased U and Ra content

PERIODICAL: Radiobiologiya, v.3, no.1, 1963, 132-138

TEXT: To elucidate the relative importance of chemical and
radiation effects of radioactive substances on plants, bean
seedlings were grown in pots containing soil to which U
(concentration 4×10^{-7}%) and Ra (1.06×10^{-7}%) had been added,
while control plants were grown in pots containing normal turf soil;
control and treated pots were placed in one of two trenches, one
having normal background radioactivity (0.00004 r/hour) and the
other with a radiation level of 0.002 r/hour, derived from U
(10^{-2}%) and Ra (10^{-7}%) sources in the walls.   Observations were
made for several weeks on the growth and development of plants
kept under the four different environments.   The results showed
that the U and Ra had an injurious effect on growth, retarding the
upward growth of the stem and the formation of new leaves,
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The growth and development ...

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reducing the general productivity (including fruit yield) and accelerating the processes of ageing. It was clearly shown that these effects were exerted when the U and Ra were not present in the soil and thus had no direct contact with the plants, indicating that their effects on growth are primarily associated with their radiation emissions rather than chemical properties. Analysis of plants grown on the supplemented soil indicated that Ra had been absorbed into the roots, leaves, stems and fruits, proving a source of chronic internal radiation. There was, however, evidence that chemical factors, particularly in the case of U, also influenced growth adversely in a distinctive manner. Reasons for the effects on growth of the very minute radiation doses applied in the investigation are discussed: the results are thought to indicate the need for a revision of the threshold doses currently accepted for higher plants. There are 2 figures and 3 tables.

ASSOCIATION: Laboratoriya radiobiologii Komi filiala AN SSSR, Syktyvkar (Radiobiology Laboratory, Komi Branch AS USSR, Syktyvkar)

Card 2/2   SUBMITTED: May 7, 1962

KONDARAKI   N. I.

AUTHORS: Zelinskiy, V. V.,   Kolobkov, V. P.,   20-3-10/52
             Kondarakiy N. I.

TITLE: On the Connection Between the Degree of Efficiency of
             Some Fluorescence Quenchers and the Position of the
             Fluorescence Spectrum (O svyazi effektivnosti deystviya
             nekotorykh tushiteley fluorestsentsii s polozheniyem spektra
             fluorestsentsii)

ABSTRACT: The present paper carries out a qualitative investigation of
             the connection between the influence exercised by foreign
             admixtures upon the duration of the excited state and the
             position of the fluorescence spectrum. The degree of
             efficiency of the quencher (tushitel') is here characterized
             by the quantity

$$k = (T_1 - T_2)\, \eta \, / T_1 T_2 c$$

Here T_1 denotes the duration of the excited state with
the quencher lacking, T_2 - the duration after a quencher has
been added, with given concentration of the quencher, c - the
concentration of the in mol/ℓ η - the viscosity of the

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Spectrum

             solvent in poises. The quantity which is directly measurable
             is the difference of the phases of the modulated
             fluorescence light of the illuminated and not illuminated
             solutions. The process used here increases the a accuracy
             of the determination of the degree of efficiency of the
             quenchers considerably. As foreign quenching bodies iodine
             triethylamine, potassium iodide, aniline, and diethylaniline
             are used. The authors investigated the effect of these
             admixtures upon the duration of the fluorescence of some
             3-, 4- and 3.6 derivatives of the phtalimide of several of
             the solvents mentioned here. The individual results of these
             investigations are shown in form of a table. 2 diagrams
             illustrate the dependence of the degree of efficiency of the
             quenchers on the position of the fluorescence spectrum of
             the respective solution for various derivatives of the
             phtalimide. In certain cases the degree of efficiency
             increases with increasing frequency of the maximum of the
             fluorescence spectrum. A dependence of the degree of efficience
             on the position of the spectrum does not only exist, but it

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On the Connection Between the Degree of Efficiency of Some   20-3-10/52
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Spectrum

    is even essential: The influence of the other properties
    of the solvent upon the degree of efficiency is, however,
    of less importance. These rules, however, do not hold good
    with respect to the degree of efficiency of the action of
    the potassium oxide on the fluorescences of aqueous
    solutions. The behavior of individual derivatives is then
    discussed. There are 2 figures, 2 tables, and 3 references,
    all of which are Slavic.

PRESENTED: June 6, 1957, by A. N. Terenin, Academician

SUBMITTED: May 28, 1957

AVAILABLE: Library of Congress

Card 3/3

EMDINA, S. M.; KONDARATENKO, V. N. (Engr.)

Electric Welding

Speed regulator for welding parts of com-
plicated form. Avtog. delo, 23, no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

KONDAREV, M.

AGRICULTURE

KONDAREV, M.   Ampelografiia; uchebnik za studentite ot lozarogradinarskiia
              fakultet, Plovdiv. Sofiia, Zemizdat, 1957. 259p. (Universitetska
              literatura)
              KA   Not in DLC

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 2
                                        February 1959, Unclass.

(SOV/25-59-5-30/56

AUTHOR: Kondarev, Mincho, Professor and Assistant Rector (Plovdiv)

TITLE: Bulgarian Vineyards

PERIODICAL: Nauka i zhizn', 1959, No. 5, pp 40-47 (USSR)

ABSTRACT: The author describes vineyards and the vine industry in Bul-
                 garia, which has been nationalized. The vineyards occupy
                 6000 hectars with modern methods of cultivation. Artificial
                 fertilizers increased production by 50 to 100%, reaching
                 15,910 kg of grapes p/hectare at Perushitsa near Plovdiv.
                 The exportation of grapes increased from 57 million kg in
                 1941 to 100 million kg in 1958. There are 4 drawings.

ASSOCIATION: Vysshiy sel'skokhozyaystvennyy institut imeni V. Kolarova
                 (The Higher Agricultural Institute imeni V. Kolarov)

Card 1/1

KONDAREV, Nikola, prof.

Strategy and tactics of the international working-class and communist movement. Godishnik Inzh stroit inst 13 no.4:3-48 '61 (publ.'62)